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(12) United States Patent Wurth et al.

(54) ELEVATOR COUNTERWEIGHT SIGNALING SYSTEM

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(56) References Cited

U.S. PATENT DOCUMENTS

3,791,490 A *	2/1974	Smith	B66B 5/022
6,296,080 B1*	10/2001	Draper	187/278 B66B 5/04 187/373

(Continued)

FOREIGN PATENT DOCUMENTS

CN 203173628 U 9/2013 CN 206447435 U 8/2017 (Continued)

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(57) ABSTRACT

An elevator counterweight signaling system is provided. The elevator counterweight signaling system includes an actuation assembly configured for contact with an elevator counterweight guide rail. A signaling assembly is configured for electrical communication with the actuation assembly and one or more electrical connectors is configured to electrically connect the actuation assembly with the signaling assembly. The signaling assembly is configured to provide visual and/or audio indications of a moving elevator counterweight assembly.

20 Claims, 7 Drawing Sheets

